

Life thrives at polar 'Space Base'

Extreme cold, ice, darkness challenge Airmen

story and photos by Michael Tolzmann

Landing on a snow-packed runway 700 miles north of the Arctic Circle in winter can be a white-knuckle experience for anyone. But that's what it's like at Thule Air Base, Greenland.

Blinding winds howling at more than 50 mph, temperatures plunging below zero and 24-hour nights are commonplace there.

No wonder. Thule is more than 500 miles above the most northern part of Alaska. If it were in the Southern Hemisphere, the base would be at the same latitude as Antarctica. It is the Department of Defense's northernmost base.

It seems like a strange place for Airmen to serve. But in a land more home to reindeer, arctic fox and musk ox, they are helping ensure the Air Force's warfighting future by providing a key mission: missile warning and space surveillance and satellite command and control operations.

From the moment their feet touch the ground, Airmen discover an uncommon experience, beginning with handshakes from the base commander and senior leaders who endure the extreme runway cold to welcome each and every new arrival.

Airmen serve a one-year remote, unaccompanied tour in a multinational workforce on a nearly deserted, rocky, frozen landscape. Their home is on one of the most extreme environments found in the Air Force, or anywhere.

"This is not something you get to experience every day, or even in a lifetime. The beauty here ... you cannot express the magnitude," said Col. Edward A. Fienga, 821st Air Base Group commander. The group operates and maintains the base in support of its vital space missions.

"It looks like the moonscape here. It has an incredible, rugged beauty of its own," said Lt. Col. Bob Pavelko, commander of Detachment 3, 22nd Space Operations Squadron.

Lying halfway between Moscow and Washington, D.C., Thule started in the 1950s as a post in the vast defense net built to hem in the Soviet Union. Today, the base has two major space missions. It supports Air Force Space Command, whose capabilities are a critical component for success in modern warfare, especially in the war on terrorism.

Two Thule units help the United States maintain space superiority.

As temperatures hover at 30 degrees below zero, the Airmen and radars of Detachment 3, 22nd Space Operations Squadron stand watch over North America's frozen north.



Tech. Sgt. Bryan Schubert checks a moving satellite dish inside one of four “golf ball” protective dish covers as it tracks a satellite moving across the northern polar sky over Thule Air Base, Greenland.



by Tech. Sgt. Dan Rea

Satellite trackers

Detachment 3 is part of the 50th Space Wing at Schriever Air Force Base, Colo. Its primary mission is to communicate with polar-orbiting satellites — sending information to and receiving data from the satellites — using three massive satellite dishes at an automated remote tracking station. Unit Airmen and civilian contractors provide telemetry, tracking and command operations for American and allied government satellite programs. Large, spherical domes house the satellite dishes to protect them from the extreme weather.

“Space is the ultimate high ground. If we lose the ability to communicate with our satellites, we lose that advantage,” Colonel Pavelko said.

Detachment specialists communicate with satellites 10 to 14 times a day and receive and relay data used for communications, navigation and weather. They make more than 22,000 satellite contacts per year. The Airmen and civilians provide indirect support to warfighters by moving data and information that may be used on the battlefield.

Early warning

The 12th Space Warning Squadron operates the Ballistic Missile Early Warning System. Part of the 21st Space Wing at Peterson AFB, Colo., the squadron’s primary mission is the detection of intercontinental ballistic missiles and sea-launched ballistic missiles.

Squadron Airmen also watch the sky high over the northern polar cap. They have a secondary mission of space surveillance, monitoring objects in space that come through their polar coverage area. They perform these missions with a four-story-tall, two-faced, phased-array radar system. The Airmen send the information they gather to Cheyenne Mountain Air Force Station, Colo., to update a master space catalog. Two or three American or Canadian servicemembers monitor the system’s console at all times.

Greenlandic hunter Otto [top left] and 1st Lt. Lance Brenneke head home after a six-day dog-sledding expedition in northwest Greenland. The lieutenant is with Thule’s 821st Support Squadron.

“Up to 3,000 miles away, we can see a piece of metal the size of a softball,” squadron commander Lt. Col. Timothy Lincoln said.

Thirteen miles from the center of the base, the BMEWS site sits atop a large hill, giving its radar an open view northward. Because of the severe winter weather, the site has its own 15-room “storm dorm” to house workers should bad weather prevent them from returning to Thule.

Security forces Airmen protect this Air Force “priority level one” asset 24 hours a day.

As part of the Air Force’s modernization plan, the system is undergoing an upgrade to its radar and will become part of a new missile defense called the ground-based midcourse defense system. The new capability will support a larger Department of Defense system that could destroy incoming missiles before they re-enter the atmosphere. The upgrade should be complete by 2010.

Life at Thule

Getting the missions done, as well as life at Thule, has its challenges. During winter, only aircraft and dog sleds can make it to the base. The nearest village is 75 miles away. Winter storms can restrict people to their rooms.

“But for the most part, we have a very normal base with lots of facilities for quality of life that keep people at the edge of mental acuity so they can perform their jobs well,” Colonel Fienga said.

Airmen work with civilians and contractors from Canada, Denmark and Greenland. The total workforce of about 600 people has many contractors. About 52 percent are Danish.

“The continuity here is represented by the contractors here for the long term, whether it’s U.S. or Danish contractors,” Colonel Fienga said.



Security forces Staff Sgt. Nasim Norrisromine [top right] marks off a 100-meter cordon area on a Thule base map. The area is one security forces would cordon off and secure during an emergency.

Thule can receive visiting aircraft, a mission now more common. With the closing of Keflavik Air Station, Iceland, Thule has become an alternate landing base for transiting aircraft. Alaska Air National Guard aircraft often stop for fuel when moving to or from a theater of operations.

“It’s a unique opportunity here ... just being in the darkness,” Colonel Fienga said. “With a one-year assignment, you can roll up your sleeves and really get something done because you’re likely to only be one-deep in your job. You have a lot of responsibility at a junior rank.”

For a month, around December’s winter solstice, the sky is black. For another two months, dim twilight is as bright as it gets and that lasts only a few hours a day. So Airmen and civilians develop ways to deal with the harsh environment.

Senior Airman Tom Gast, of the 821st Support Squadron, said the first thing he does in the morning is turn on his “happy lamp.” The lamp replicates the light of the sun to keep his circadian rhythms, or daily cycles, in balance.

“The cold is one of the biggest challenges,” said Airman Pedro Pita, of the 821st Security Forces Squadron. “If you’re trained and know what you’re doing, you’ll do all right.”

Getting used to the cold is also a safety concern. Average winter temperatures range from 13 to 20 degrees below zero, with wind-chill measurements commonly plunging into a dangerous zone of 50 degrees or more below zero.

“The weather can be calm one day, and then when you wake up the next day, the wind is blowing at 65 or 75 knots, and you can barely see outside. So you always have to be prepared to be stuck wherever you are,” said Staff Sgt. Wayne Taylor, also of the security forces unit.

Sergeant Taylor keeps busy to deal with the isolation and weather. And he doesn’t forget his family.

“I stay in constant contact with my family, hang out with my friends and study for promotion testing,” he said.

Staying active is the key to coping, for some.

“The way I deal with these challenges is by staying active, not sleeping all the time. I also buy nice, warm, comfy clothing,” said Airman 1st Class Angela Ortiz, another security forces Airman.

Thule is a small base, so everyone knows everyone else. That has its advantages.

“I had the opportunity to play basketball with our base commander, which was really neat. I don’t know if you could do that at any other base,” security forces Airman 1st Class Tara Horvat said.

When summer hits, things change. The sun comes out, and the pace of life picks up.

“You can climb Mount Dundas or go ‘Thule Tripping’ [walking or driving off base],” Airman Pita said. “You can go down to the waterfall or to the ice caves.”

When the sun comes out, and stays out, the trick becomes knowing when it’s time to hit the sack. Even with shades to block out the sun, it’s not always easy to fall asleep.

“You’ll stay up all day and not realize that it’s two or three o’clock in the morning,” Airman Pita said.

Thule’s mission is essential for the Air Force to maintain air and space superiority. But it is not for everyone. But those who endure the year-long tour will always remember the extreme, polar base. Images of their Thule tour will remain frozen in their minds as reminders of a once-in-a-lifetime polar experience. ♡